

Tight-Lacing in Excelsis.

By Dr. ANDREW WILSON. See page 370.

HEALTH

A WEEKLY JOURNAL OF
DOMESTIC AND SANITARY SCIENCE.

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EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

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FRIDAY, SEPTEMBER 14, 1888.

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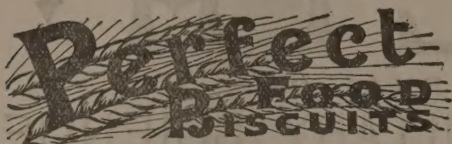
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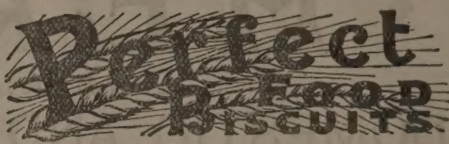
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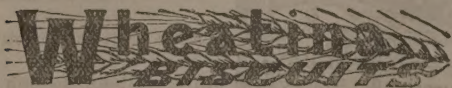
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♦ HEALTH ♦

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: FRIDAY, SEPTEMBER 14, 1888.

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Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—Herder.

A DISCUSSION has of late been taking place in more than one quarter concerning the proper mode of paying doctors' fees. It would seem that the public mind is exercised, not only regarding the proper amounts to be paid to physicians and surgeons, but also regarding the manner in which the fee should be paid—in the case specially, I may add, of consulting doctors.

As to the first of these points, doctors have themselves to blame if the public do not know what to pay them. In some quarters, I believe, a regular tariff is drawn up, calculated on the basis of the patient's (supposed) income or rental. I opine this is a perfectly just fashion of estimating the amount which the doctor is entitled to receive per visit. A man who rents a house at £200 per annum is likely to afford a higher fee than one who inhabits a house rented at £40, and while 5s. or 7s. 6d. a visit may content the doctor in the latter case, he may naturally expect his 15s. or guinea in the former instance. I do not think anyone can or does object to this "sliding scale" in the matter of physicians' fees. The man who presumably can afford most, pays most, and there is an

end of the matter. On this basis no one can grudge the doctor his often hard-earned wage.

BUT, as to the second phase of the question—that of the manner in which the doctor is to be paid—I fail to see anything save a decided piece of mawkish sentimentality in the raising of such a question at all. Some persons appear to be much exercised in their minds as to whether they shall put the guinea-fee of the consulting physician on his table, or slip it into his hand, or lay it unconcernedly on his mantelshelf, or put the money into an envelope, and so on. Why there should be any fuss whatever made over the manner of paying a medical man is a matter which any robust-minded person may feel surprised should ever have cropped up for discussion.

LAWYERS, clergymen, and teachers are equally "professional" men with doctors. Do we ever hear of any members of these professions feeling a hesitation about accepting their fees or salaries? or do we ever think twice about giving them their just dues in an open and lawful fashion? I trow not; and yet there do exist persons who are in sore trouble as to the manner in which the physician or surgeon is to be paid. A doctor has always to discharge a large number of duties as a philanthropist, and without fee or reward; but he does not get his "bread and cheese" merely by his humanitarian duties. He is, like all other workers, a labourer, and as such is worthy of his hire. I say therefore, pay your fees to the doctor as you please, in cheque, gold, or notes; and rest assured his thanks will be none the less grateful because you are honest and candid enough to recognize that his services are such as demand ready and early recompense.

WHEN the fair sex take up a work of philanthropy in earnest they generally carry through that work with vigour and success. It is pleasing to note what the French ladies are doing for their sisters in the shops. Their campaign in favour of the shop-girls, says a Paris correspondent, has proved a success. In many of the large establishments the young women are now allowed to sit when customers are rare, and the public has certainly no reason to complain of any lack of civility or attention.

ENCOURAGED by this victory, the "dames of high-degree" have just drawn up another petition, in which they ask that the goods which they have bought on the Saturday may not be delivered until the Monday. According to the present arrangement articles purchased

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on the Saturday afternoon after the carts have started are sent round on the Sunday morning; but the Duchesse de Doudeauville, the Princesse de Beauvau, the Comtesse Albert de Mun, and other ladies of the Noble Faubourg plead for a whole holiday for the entire staff of the Bon-Marché and other large shops, and say that, so far as they are concerned, they would prefer the articles waiting over until the Monday. So would many of their humbler sisters, who like to get up betimes, lock up their apartments, and sally forth with their families for the day. When will the ladies of London and other cities start a like crusade?

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THE "burial" question seems to be a never-ending one. It is curious to note how, with cremation at hand, practical, speedy, safe, sanitary, and decent in its method, people will rush off at a tangent in search of other methods of disposing of the dead. Thus I note that Dr. Cooper, of Pittsburg, has invented a process which he expects will supersede embalming and cremation, being much less expensive than either. He subjects a dead body to hydraulic pressure, and condenses it into a small, solid block, like veined marble.

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THE body of a full-grown man can, he claims, be reduced to a cube of twelve inches. Dr. Cooper exhibits a small cross, apparently of marble. "That," says he, "is the body of a child converted into a handsome ornament." The material is tasteless, odourless, and seemingly imperishable. Cremation costs £10. Compression will cost only a fifth of that sum. But surely if cremation is to be objected to from sentimental reasons Dr. Cooper's "compression" system should have no chance of adoption. Besides, you cannot compress disease-germs out of existence.

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HERE is a note for my lady readers regarding a cure for freckles. Miss Carrie Townsend, a South St. Louis girl, tells the following: I always have a feeling of pity for girls who have florid or sallow complexions, or whose faces are bespattered with freckles, looking as if they had been about when a bran bin had exploded. I feel sorry for them, not because of any harm that the freckles do, for really I think them nice, as they are evidence of a pure, light, and healthy complexion, but because the removal of them or the sallowness is so easy if they only knew how. I accidentally discovered a sovereign remedy a couple of years ago, which cost next to nothing.

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ONE day the plumber shut our water off and I could get none in which to wash my face. I was fearfully soiled, and, looking out of the window just then, I saw a friend approaching to call on me. Glancing about me, I noticed half of a watermelon from which the meat had been removed some time before. It was partly filled with juice, and I hastily washed my face in it. The result was so soothing that I repeatedly washed my face in that manner. Judge of my astonishment a few days later on seeing that there was not a freckle left on my face.

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ON a comparatively recent date, between 1,300 and 1,400 tins of meat, consisting of beef, mutton, and rabbit, which had been selected from cargoes brought to London from New Zealand, were conveyed within the precincts of the West Ham Police Court by an inspector of nuisances of the sanitary authority of the Port of London; about 20 per cent. being found to be unwholesome, the putrid tins were all ordered to be destroyed.

Original Essays

"Life is not to live, but to be well."—*Martial*.

TIGHT-LACING IN EXCELSIS.

BY DR. ANDREW WILSON.

FROM time to time in the pages of *HEALTH* reference has been made to the matter of tight-lacing, as a subject of social importance to the sex in whose experience this habit is exemplified. On grounds anatomical, physiological, and medical, the habit has been duly denounced, and its mischievous tendencies in the way of disease-production illustrated and explained. I have quoted from the words and works of some of the most eminent authorities both in this country, in America, and on the Continent, scientific details of exact nature tending to show the baneful effects of tight-lacing as commonly practised. Hitherto, one could find not the faintest echo of support for tight-lacing—and very little support for the habit of wearing "stays" of any description—within the ranks of medical men; while sensible women have been found themselves to advocate, with greater or less warmth, the abolition of those monstrosities which, under the name of "corsets," disfigure and distort the anatomy of the female chest and abdomen, displace the organs contained within these cavities, induce disease, and shorten life.

I am only anticipating, therefore, in this article a continuation of the mass of correspondence which has within the past week deluged my table with reference to the corset-question. The occasion of this renewed outbreak of interest in tight-lacing is not difficult to discover. In the reports of the British Association meeting held at Bath last week, appeared a notice of a paper read by Professor Roy, of Cambridge, and Mr. T. G. Adams, "on the physiological bearing of waist-belts and stays." The opinions of these gentlemen appear to have raised quite a torrent of controversy and inquiry; and the corset-question bids fair to be re-opened under somewhat different auspices from those in which it has previously appeared.

Let us see what Messrs. Roy and Adams really said at Bath last week. I quote from the newspaper report of the meeting. The authors, says the report, had lately been making experiments, and had found that a good deal of the blood stored uselessly in the abdominal veins is, by slight pressure, placed advantageously at the disposal of the muscles, brain, and skin. This explains how men, as well as women, instinctively employ some method of abdominal compression, wearing waist bands or belts, or the more elaborate corsets, at periods of increased activity. No doubt fashion has sometimes led to the distortion of the female figure by means of stays, but if not laced too tight, the modern corset, by clasping the waist and supporting the bosom and back, constitutes a convenient combination of the different forms of girdle which have been found useful by the women of all civilized nations from the remotest times. Of course during sleep they are put off, but during hours of exertion, social or otherwise, reasonable tight-lacing is fitted to increase mental and physical activity. They, however, cautioned young ladies against carrying this to an injudicious extreme. It was suggested, by the way, to trainers of horses that if they girthed on the racing saddle behind the ribs instead of over them they would thereby gain for the horse the same advantage as was experienced by the long-distance runner from his broad tight leather belt.

Another report adds that the authors above referred to traced the history of belt and girdle wearing amongst the ancients, and the practice of girthing animals when extra work was required of them. The modern corset was introduced into England in the 12th or 13th century, and down to the time of Elizabeth they were worn by men as well as women. As a physiologist, Dr. Roy did not consider the modern corset an unmixed evil, but said that properly fitting stays did not interfere with breathing, and were of real service to the wearer when not too tightly laced. He considered that tight lacing commenced when the stays interfered with the muscular freedom required in playing lawn tennis or running upstairs. Whilst the professor was reading the paper loud dissent from his views, adds the account, was several times expressed in various parts of the room.

Now, assuming that the above reports express fairly the gist of the opinions of Messrs. Roy and Adams, it is not difficult, I imagine, completely and successfully to traverse their conclusions. I have no intention of discussing the corset-question here, seeing that in these pages the subject has already been fully ventilated. At the meeting in question, the views of the authors did not want for hostile criticism.

When discussion was invited, Dr. Wilberforce Smith took up the cudgels on the side of dress-reform by denouncing in the strongest terms the "evils and curse," not only of tight-lacing, but of wearing stays at all. He said he had made a special study of the question, and averred that the wearing of stays when tight-laced was a terrible evil. He averred that after wearing stays for a few years the muscles of the back were withered. The truth of this might be demonstrated by anyone putting his arm in splints for a few weeks, and then it would be found that the muscles would be to some extent atrophied. He asked why it was that women wore stays, and he replied to the question that it was through their natural admiration of beauty. The æsthetic side must be successfully attacked before women would give up the practice of tightening their waists in order to bring themselves somewhere within the lines of beauty of a classic figure or an Etruscan vase. Women had a natural admiration for beauty, and until the present mode of dress was altered, it was almost useless to attack the present system of wearing stays. He suggested that the present skirts should be got rid of altogether, or much restricted, and the suggestion was very generally applauded. Physiologically considered, the damage done by tight-lacing was simply tremendous, and girls and women not only injured themselves by the habit, but they entailed tremendous injury on their progeny.

Next followed Mr. Johnston Lavis, who also entered a strong protest against the habit of wearing stays at all, and he endorsed everything which the preceding speaker had said against tight-lacing. He was astonished to find a pathologist saying anything in favour, not only of tight-lacing, but of wearing stays at all. He quite agreed that women were fond of admiration, and were anxious to have a pretty figure. They tried to gratify their æsthetic tastes by lacing tight; but, speaking for himself, he regarded a tight-laced woman as the very lowest form of woman, a frank expression which elicited loud laughter and some applause.

There was, however, at least one dissentient voice heard in this chorus of criticism. Miss Lydia Becker, putting herself on the side of the minority, spoke out boldly in favour of wearing stays, rigid, and not elastic, stays, comfortably laced. Generally speaking, she said she was in favour of that style of dress which her sex had

chosen to adopt, and she thought if girls went in for dress reform as advocated by certain lady reformers, they would only be laying up for themselves a great deal of discomfort and a great deal of disease. Compressing the figure by tight-lacing was an abuse of tight-lacing, and not tight-lacing itself. At this distinction and definition, says the report, there was a good deal of derisive laughter, which Miss Becker met by saying, "I stand up for stays and tight-lacing," and she quoted a lady who said, "To be well and comfortably dressed is a sensation of delight which religion is incapable of affording." Without going quite so far as that, she ventured to say that the lady when making the statement had on a comfortable pair of stays well laced. The desire to make themselves attractive to the opposite sex was one reason why women wore stays, and there was no age when a woman could be said to have given up the idea of being admired. She once asked a lady 80 years of age at what period of life a woman abandoned the idea of making herself attractive, and the lady replied with some acerbity, "You had better ask someone older than myself." In conclusion, she said to women, "Stick to your stays; they improve the form, give warmth, and assist you. Stick to your stays, and triumph over the other sex."

Having thus given as full an account as I have been able to obtain of this notable meeting, it may be well to examine the statements made by the various speakers.

In the first place, with all deference to Dr. Roy and Mr. Adams, I would assert that the expression contained in their paper regarding "blood stored uselessly in the abdominal veins" is entirely open to question. I frankly own I know of no such condition existing in a human body in a state of health. Perhaps, later on, it may be found, of course, that Messrs. Roy and Adams have discovered venous conditions in the human subject hitherto unknown to science. Unless these gentlemen have been grievously misreported, they are evidently much at sea in the form of expressing their views of the normal and natural venous circulation of the human body. The logical argument must be (if they are correct in their statement) that nature is much at fault in her construction of the human frame to require tight-lacing in order to maintain the natural circulation. Either the body, in its natural and unconstricted condition, is perfectly capable of carrying on the circulation in the abdominal veins (and everywhere else) in an efficient fashion or it is not capable of thus conducting its blood-flow. If we assume the former and sensible alternative, then is tight-lacing an anomaly, a barbarism, and an evil. If we adopt the latter supposition, then we must conclude that we are imperfectly-constructed beings after all—an argument not likely to be adopted by any rational mind.

Again, if the argument regarding the necessity or advantage, call it by what name we will, of bandaging the chest to assist the abdominal circulation be admitted, how comes it, may I ask, that the vast majority of men, and also those women who do not tight-lace, maintain their health at all? If the argument is to be taken as meaning that during periods of great exertion men wear belts, and that, therefore, corset-wearing is beneficial, this view of matters is disposed of on the plain ground that active exertion is not our natural condition, and that the spurts of the athlete do not represent the way of life of the normal individual. Our authors speak of the girdle or *cincture* as a very ancient piece of female attire; but surely they cannot mean to insist that the girdle of old had any resemblance to the modern tight corset in all its chest-reducing powers. As regards the statement that "tight-lacing is fitted to increase mental and physical

activity"—I suspect our authors really said, or meant, stays not tightly-laced—I can only consider their assertion, even as just modified, an outrageous declaration. Have things really come to the serious assertion of the literally monstrous statements that the use of the corset is not only necessary for the benefit of the abdominal veins, but is also advantageous for "mental and physical activity." If so, our authors may be well entitled to the distinction of being the first to propound the doctrine that the mental and physical progress of a nation depends on the use of stays!

I do not know that overmuch importance is to be attached to the opinions of ladies and gentlemen expressed in the heat of a discussion conducted in a sectional meeting of the British Association. I have heard a good deal of amateur-science expounded on such occasions, and sometimes views and ideas utterly new to science of any kind and calibre. One must not judge opinions too hardly when they are expressed under the circumstances represented in a quasi-popular assembly. Messrs. Roy and Adams, it will be noted, expressed the opinion that tight-lacing commenced when the muscular freedom was interfered with. Have they ever met with a woman who owned she was tight-laced? or have they never heard a woman encased in a corset with a seventeen-inch waist declare "she felt beautifully free and quite comfortable"? When medical men make statements of the kind just quoted, or when they declare that stays assist the circulation and the faculties of brain and muscle, they should be aware that they are opening the door widely for abuse of their recommendations, and are simply fostering a habit which one may declare without fear of contradiction has been roundly and soundly condemned by the first physicians and surgeons of the land.

Miss Becker's remarks may be dismissed in a few words. It is difficult to gather from the report quoted whether this lady was really serious in her remarks or not. It would have been interesting to have heard Miss Becker's full explanation of her astounding proposition that women wear stays to make them attractive to the opposite sex. It is clear she might have given even Darwin himself a "wrinkle" for his theory of "Selection," in relation to the pairing of humanity in marriage as a matter of stays. Her story of the ancient dame of eighty, who remarked that Miss Becker must apply to an older woman in order to discover the period of life when the female sex relinquishes hope of being attractive to the other sex, is a very old one. It is to be hoped at least that at eighty years of age the folly of tight-lacing becomes plainly apparent.

Miss Becker is an ardent advocate of womens' rights, and I am not surprised to note that she advised her sisters to "triumph over the other sex." Her *recipe*, however, for effecting this desirable end is one hitherto unheard of on the womens' rights platform as a political or social panacea. "Stick to your stays" says Miss Becker; and this war-cry may perhaps be placed on a par with Messrs. Roy and Adams' assertion regarding the dependence of "mental and physical activity" on the wearing of corsets.

Altogether there must have been "great fun," as the schoolboys say, on Friday last at Bath in the Anatomical and Physiological Section of the British Association for the Advancement of Science. But is it not just a little incongruous at this time of day to find that presumably learned body discussing the socially antediluvian question whether or not stays are harmful things? Miss Becker may be a capital politician and an ardent reformer, but it is clear she will be the better for a little wholesome

instruction on the physiology and anatomy of the chest, in relation to tight-lacing, before she advocates stays—even as a means of 'triumphing over the other sex.'

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—Gay.

THE CURE AND PREVENTION OF LANGUOR.

IN ordinary states of health, says Dr. Richardson in the *Asclepiad* for September, the strongest persons are apt to feel sensations or fits of languor which they call fatigue, and for which they can give no reasonable explanation either to themselves or to others. The weather largely influences this condition. A moist and warm atmosphere always increases the disposition to languor; a moderately cold and dry atmosphere greatly prevents it. The sense of relaxation and disposition to sleep must not be confounded with true fatigue, arising from hard or prolonged physical or mental work, but must be taken as simply due to a condition in which there is weariness without a sufficient reason for it. When this condition is strongly present, it is marked by one particular sign, which is of itself characteristic: it comes on after repose. The affected person experiences it most on rising in the morning, and even after a good night's sleep is still oppressed by a sense of weariness, a feeling as if the day, with all its cares and anxieties, could not be passed through. The desire, almost irresistible, is to go to sleep again, a desire which, if gratified, increases the evil, and makes the day heavier than it otherwise would be. That it is not real fatigue or exhaustion which causes the sense of languor now being described is clearly shown, not only by the fact that the feeling comes on after long repose, but that it is dispersed in the day, after it has been present in the morning, by the exercise and duties of the day. I have no doubt that it is caused by the accumulation in the body of some diffusible and light chemical substance, which acts after the manner of an intoxicant, and is a true intoxicant to the nervous system.

The probable physiology of the condition is plain, but what is to be the cure, and, above all, what is to be the prevention? The cure is exercise and the wearing of clothing which will give free liberation to the exhalations of the skin. Every one who is affected with the sense of languor is soon conversant with the knowledge that if he resolves to throw off the load which oppresses him and takes a short sharp walk or other good and wholesome exercise, he is always relieved, and many find this mode of cure so certain that they invariably follow it. Others, and I fear the majority, are so oppressed that they feel as if they could not bring themselves to the effort of throwing off the sense of weariness by resorting to anything like active motion. When the oppression is strongest and exertion is most demanded, they try to balance betwixt the two modes of treatment, the sharp exertion and the seductive sleep. They give way to the sleep; the giving way becomes a habit; in a very short time the habit lapses into a confirmed method, and with the habit structural changes in vital organs of the body are soon set up, and add rapidly to the evil. The body becomes obese, the liver becomes inactive, the mind becomes dull, and a short life is, of necessity, determined.

The treatment of languor in the healthy consists, then, in taking exercise in due, but in moderate, amount.

To go in for desperate exercise, as some do, is to frustrate, not to assist, cure; for desperate exercise produces actual fatigue, which nothing except rest will cure, and then the weariness from actual overwork and the weariness from underwork get confused the one with the other, and all goes wrong.

Rightly conducted, the cure is exercise, and the prevention is continued exercise carried out daily and regularly, whatever the temptation may be to give it up. Second to this is light and porous clothing, as I have many years taught. Whatever holds or takes up the fluid exhalations from the skin is not clothing fit to wear. Whatever cannot be easily breathed through is not clothing that is fit to wear. No kind of clothing for the human body is so good as that which admits freely into and through its meshes the most perfect purifier and the most perfect non-conductor and healthy equalizer of temperature known—atmospheric air.

Patients sometimes come to me literally borne down with the weight of their clothing. They are coated with three or four layers of heavy and close materials. These materials are saturated with the moisture from the skin, are unduly heavy, are always damp, if taken off, for a short time, leave excessive cold, and if kept on too long, induce oppressive heat; all round mischiefs of sure and certain development. A fairly healthy person who takes reasonable outdoor exercise daily, and who clothes himself lightly in porous material, will feel no weariness except that which comes naturally from healthy fatigue.

RACE-INFLUENCE ON DISEASE.

In the course of an interesting address delivered at the recent meeting of the British Medical Association in Glasgow, Dr. T. Clifford Allbutt, in referring to the escape of certain races from disease, said that the many strange and extreme forms of hysteria seen in the French people, and described by Professor Charcot, are forms and degrees of it rare in England, and rarer in our northern counties than in the southern. Hysteria, in its eminent types, is seldom met with in Yorkshire. Historical matter of this kind exists abundantly, and should be brought together; and, although my direct speech to-day is of constitutional states, yet of these extraneous diseases may also be a test; for in truth, if we go more closely into the subject, all morbid phenomena are the outcome of reactions between the mediate actions of the environment stored up in the organism and the immediate actions of the present: so that, if the present be constant, variation must depend upon the innate. Now, such variations are known to be manifold, and should be brought together systematically.

To the immunity of negroes from yellow fever, says Dr. Allbutt, I have already referred, and this immunity does not depend upon survivals, as does their relative immunity from paludal fevers and sunstroke: for, as Dr. Coats says, these latter immunities do not lie deep, but wear out on removal of the individual to a healthy locality; so that he and his descendants tend to lose such immunity. Moreover, the resistance to yellow fever is common to all negroes, whether inland or coast bred, and is transmissible by them to mixed progeny so far as their admixture goes. Their immunity from syphilis is likewise a deep-set quality. On the other hand, the negro is very susceptible of cholera and small pox, elephantiasis and tetanus, and is also liable to prolonged suppuration. The Arab, Dr. Bertherand says, is not liable to tetanus. The poison of beri-beri, oddly enough, does not attack

Europeans until they have lived in the district of it for some time; then they become liable to attack. But for all Aryans—for Europeans and Hindus, let us say, whose habits are so different—its death-rate is low: the average death-rate for all races being 34·6 per cent., and even 51·9 for Chinese; for the European it is 28·6, and for the Hindu 27·8; for the Japanese it is only 12·4. Mr. Darwin thinks that these fixities of inheritance are not merely results of antiquity, but are necessary correlations of growth.

The curious facts made out by the late Mr. Denny, of Leeds, and others, concerning the inability of certain lice to live on other varieties of man or species of animal than their own, are of the same kind, though in some of these cases the inability to attach themselves may be simply mechanical. Pasteur tells us again that Cochinchina fowls resist chicken cholera, and that the field mouse resists the septicæmia so fatal to the house mouse; with this a "concomitant variation" has been shown by Koch, who finds that the normal blood of the latter forms crystals with difficulty, whereas that of the field mouse gives crystals readily. Darwin tells us that white cocooned silkworms resist the disease which devastates the yellow, Chauveau, that Algerine sheep are not subject to anthrax. Cattle and swine are very subject to pearl-eil, while the goats which graze beside them escape. The dog is almost insusceptible to glanders, but the ass and the guinea-pig take it readily.

Peptones which prevent the coagulation of the blood in carnivora have not that power in herbivora; carnivora, again, are said to be subject to cancer, and herbivora not to be so. Cattle in marsh lands seem indifferent to the marsh poison, and so do dogs; but individuals of different races of the same species, if brought into the district, become infected. Mildew, curl, and aphid rather attack fruit trees in which the glands under the leaves are absent. Mildew selects also white onions and verbenas, and the paler grapes. New sorts of potatoes, as I am told at Goole, are at first disease-proof, but in ten or twelve years, although these varieties stand as to appearance, they lose the immunity, and new seedlings have to be raised. Magnums and Beauty of Hebron are expected to lose immunity gradually. So new apples die out. Ribstones are failing in constitution, though not in character, and are very subject to extraneous disease.

Not only may we accumulate many more such instances, but we may add others from the phenomena of poisons of lower series. The black pigs spoken of by Darwin as unaffected by the blood-root, and the white pigs which are injured by buck-wheat, and, most curious of all, the horses which are poisoned by honeydewed vetches and by fools' parsley only in respect of the white parts of them, come to mind. The tolerance of morphine by rabbits, again, is well known; but to my mind the strangest of these cases is that of the tsetse fly, which is only fatal to domestic animals, such as the domestic ox, horse, and dog, while the buffalo, zebra, and jackal, bitten at the same time, graze on unharmed. Man is bitten, but does not suffer, nor do dogs reared wholly on game; but if fed on milk they die; yet all young suckling animals are safe so long as they suck only. Inoculation is no defence, nor any length of life in the district.

By the study of concomitant variations there is some law to be found here which will explain, not only these cases, but a whole group of cases in which morphological and even racial similarity are compatible with enormous physiological differences; deductions cannot, therefore, directly, be drawn from the results of experiments in one animal to another; such experiments serve rather to

promote the building of a series. The differences probably consist in some simple and general condition, such, for instance, as the quantity or intensity of oxidation; in any case it is erroneous to say that the phenomena of disease must differ clinically according to class, and it seems as if we must learn some other perspective of facts than the scale of life and death. But, at the same time, we must not forget how many are the pitfalls to be avoided by the inquirer, how many the conditions to be observed. For example, Mr. Sutton has shown that bird-tuberculosis is not essentially peculiar to graminivorous birds, as was supposed, but is propagated rather in them by the manner of their feeding.

THE PARKES MUSEUM, 74A, Margaret-street, Regent-street, W.—*Sixth Course of Lectures for Sanitary Inspectors.*—The annexed list of lectures has been arranged by the Parkes Museum for the special instruction of those desirous of obtaining knowledge of the duties of sanitary inspectors. The various subjects will be dealt with in a course of twelve lectures, given by well-known authorities. The fifth course of lectures already held was attended by over ninety students, and it is proposed to repeat the course twice each year, to suit the requirements of persons preparing for the examinations of the Sanitary Institute of Great Britain; the lectures will comprise all the subjects scheduled for those examinations. The course will have a further use in supplying the wants of acting inspectors and of other persons desirous of obtaining a practical knowledge of sanitary requirements and regulations. At the close of each lecture students will be allowed to ask questions upon the subjects treated. The lectures will be given on Tuesdays and Fridays at 8 p.m., in the Parkes Museum, 74a, Margaret-street, W., and students attending the course will be granted free admission to the museum and library during September, October, and November. In order to put it within the power of everyone to attend the lectures, a nominal fee only of five shillings for the course will be charged to cover the necessary expenses. Students desirous of attending the lectures are requested to send in their names at once to the secretary of the Museum, 74a, Margaret-street, W.—Sept. 25th (1) Introductory Lecture—General History, Principles, and Methods of Hygiene. Dr. George Vivian Poore, F.R.C.P.—Sept. 28th, (2) Drainage and Construction. Prof. Henry Robinson, M.Inst., C.E.—Oct. 2nd, (3) Water Supply, Drinking Water, Pollution of Water. Dr. Louis Parkes (Pub. Health Cert., Lond.)—Oct. 5th, (4) Ventilation, Measurement of Cubic Space, &c. Sir Douglas Galton, K.C.B., F.R.S.—Oct. 9th, (5) Sanitary Appliances. Prof. W. H. Corfield, M.A., M.D.—Oct. 12th, (6) Scavenging, Disposal of Refuse and Sewage. Mr. H. Percy Boulnois, M.Inst.C.E.—Oct. 16th, (7) Food (including Milk), Sale of Food and Drugs Act. Mr. Charles E. Cassal, F.C.S., F.I.C.—Oct. 19th, (8) Infectious Diseases and Methods of Disinfection.—Oct. 23rd, (9) General Powers and Duties of Inspectors of Nuisances, Method of Inspection. Mr. J. F. J. Sykes, B.Sc. (Pub. Health), M.B.—Oct. 26th (10) Nature of Nuisances, including Nuisances the abatement of which is difficult. Mr. J. F. J. Sykes, B.Sc. (Pub. Health), M.B.—Oct. 30th, (11) Sanitary Law—General Enactments, Public Health Act, 1875, Model Bye-Laws. Dr. Charles Kelly, F.R.C.P.—Nov. 2nd, (12) Sanitary Laws and Regulations Governing the Metropolis. Mr. A. Wynter Blyth, M.R.C.S.

The Family Circle

"The child is father of the man."—Wordsworth.

"In bringing up a child, think of its old age."—Joubert.

DWARFING CHILDREN.

THE advancing tide of civilization brings everything more and more into the relationship of cause and effect. The result of this is a tendency to search for preventive measures. What can be more startling to a parent than to find that the height, weight, and shape of his or her child will be influenced by the food supplied? We remember the profound astonishment that came over the face of a mother who had selected to feed her child artificially when told that it would be probably five pounds in weight and two and a half inches in length less at the age of five years than another babe fed on mother's milk. This may serve as food for reflection for some, and render it pre-eminently the desire of mothers to nurse their young. It is only common sense to infer that imperfect food means imperfect nutrition, and this last, an imperfect organization.

What is the general wasting which sweeps away half the infants born into the world, but a factor that must forever impair in some degree the system. It is but the effects of improper food and feeding, and these to an infant mean everything. As soon as an infant's stomach and bowels get out of order, the child is on the road that leads to almost all of the diseases of children. Cow's milk with its cheesy curds, starchy foods with their irritating particles insoluble in an infant's canal, barley water, egg-albumen, mucilages, and condensed milks are only so many substitutes devised by the ingenuity of manufacturers to take the place of the only natural food there is for infants. They all possess a tendency to derange the digestive apparatus. None of them are sufficient as foods for babes, however useful they may appear at times.

Perhaps of all the diseases mothers dread, rickets has most terrors next to general wasting. Rickets is due to a lack of deposition of phosphate of lime in the bones, and this want is attributable to various causes, but we will refer to two. One is a deficiency of phosphates in the food, and the other irritation of the digestive organs, preventing the absorption of the phosphates into the system. When the phosphates are insufficient, the bones begin to soften and bend; and all should understand that bending bones means improper nutrition. Certainly, bad hygienic conditions may impair the effects of fair food, but a large share of rickets is attributable to *bad* food.

Shall we pass without mention that affection wherein the joints seem enlarged, but where there is not true increased general development, but rather the reverse? We mean scrofula. Whatever the evidences may be of the identity of scrofulous and tuberculous germs, one thing is certain—that dyspeptic states are oft-times a precursor of both. Irritation of the intestine leads to enlargement of the intestinal glands, and this to tumefaction of the abdomen, debility, and no end of troubles, among which are spine disease, hip disease, white swellings, all of them tending to diminish in children the stature.

What, after all, is the practical outcome of this? The answer is unmistakable—feed the baby properly; in other words, feed the child with breast milk. In case this is not possible, still stick to the food of the young of mammals—milk. Do not forget, though, that this is

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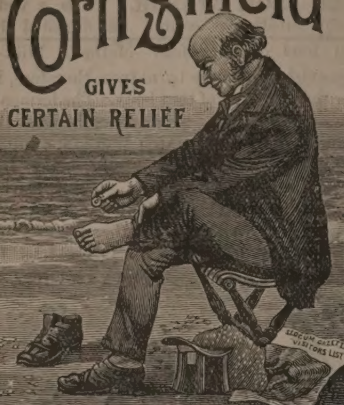
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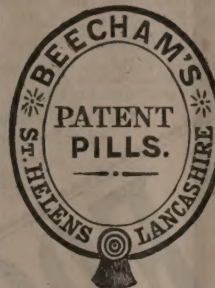
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THE STUFF THAT DREAMS ARE MADE OF.

By MEREDITH CLYMER.

THIRD AND CONCLUDING PAPER.

SOME dreams hardly belong to either of these series, and seem the spontaneous minting of fancy. But these, too, probably own a physical basis, the impressions having, at some time or other, stolen unawares into the brain and been stored in the memories, and suddenly popped out in sleep in some mad attire. Lovel's dream in the "Antiquary" is of this sort. He tells Oldbuck that in the night's dream he had been shown words that he did not remember ever having seen. The laird replies that he had read the very words aloud during the evening, adding, "Your mind was bent elsewhere, but your ear mechanically received and maintained the sounds, and your busy fancy, stirred by Grizel's legend, introduced this scrap into your dream."

Sometimes there is a projection backward, and

"Forgotten things, long cast behind,
Rush forward in the brain and come to mind."

Common sense and memory are mistrusted when we see and talk with those we know have been long dead, and they with us:

"Strange dream that gives a dead man leave to think and speak."

The influence of brain poisons, such as alcohol, opium, hashish, ether, nitrous-oxide gas, chloroform, chloral, cocaine, and so on, in the genesis and colouring of dreams, should not be overlooked. Coleridge and De Quincey were great dreamers, and both were opium-eaters.

Dreaming has a wide realm of tears, tortures, and the touch of joy. There are, according to Ben Jonson,

"Dreams that have honey, and dreams that have stings."

Some dreams "lift us above ourselves with cheerful thoughts," whilst others "abuse the curtailed sleep," and leave a weight upon our waking thoughts.

The moral faculty is sometimes dulled or absent in a dream, when we do without scruple, and even with pleasure, what we should look upon with horror in the waking state. Mr. Richard Napier, a man of tender heart, dreamed that he ran his best friend through the body, and felt great pleasure on seeing the point of his sword come out between the shoulders.

Poets have sung the patient midnight sleep, which is said to be little liable to be abused by dreams wicked or charitable. Dreams that scent the morning air are reckoned as the ones most steeped in favour. That they might enjoy their morning dreams undisturbed the Sybarites killed their matin heralds, the cocks. Dreams decline in frequency and vividness from childhood to old age; and women dream oftener and more fancifully than men, owing to their larger emotional life.

The question whether any state of sleep is innocent of dreaming is hard to answer, as the fact is one of observation and memory, and so many dreams "come like shadows, so depart," leaving no trace, as circlets made by the stone thrown into the pond. Aristotle, Descartes, Sir Henry Holland, and others, following traditional metaphysics, hold that perception never fails, and that dreaming is always going on during sleep. Lord Brougham argues that we dream only in the transit of sleep to waking, or the contrary, or when sleep is loosened,

or, in dream-terms, before or after the liminal intensity is reached; or, as Luckie Elspeth puts it, "before folk win the lang sleep and the sound." Some persons claim they never dream, but we know how soon a dream remembered on awaking passes from our memory, and small faith is to be given to such testimony. Richard Baxter and Sir William Hamilton said they always awoke dreaming. Those who, like Panza, never wish for a second sleep, because the first lasts from night till morning, are not likely to remember their dreams if they should happen.

That "cerebration" goes on in dreams we have abundant proof. Sir Thomas Browne wrote: "In one dream I can compose a whole comedy, behold the action, apprehend the jests, and laugh myself awake at the conceits thereof. Were my memory as faithful as my reason is then fruitful, I would never study but in my dreams." Dr. Franklin assured Cabanis that the bearing of political events which puzzled him when awake was clearly unfolded to him in his dreams. Condorcet perfected in a dream the solution of a difficult problem; Condillac, while writing his "Cours d'Études," developed many subjects, broken off before retiring, dreaming them over. Voltaire dreamed a whole canto of the "Henriade," Maignan the truth of his theorems, and Kruger worked out complicated questions. Tartini heard in sleep the arch-fiend play his celebrated sonata, which he wrote down on awaking; Hermas said his "Pastor" was dictated to him by a voice while he slept; Coleridge in sleep composed "Kubla Khan," and Robert Louis Stevenson tells us that his brownies do half his work during sleep, and that he dreamed the window scene in "Dr. Jekyll and Mr. Hyde." The story that Kaspar Häuser told the cobbler who discovered him, was, if not a pure invention, probably dreamed.

If the theory of sleep afore given be a true one, or even in the right direction—and it is the only one by which many of the phenomena of sleep and dreams can be explained—there is nothing strange in latent cerebration, and in the brain being always populous of images. If we suppose the cell groups variously conditioned during sleep, some empty and undergoing repair, others tenanted, but in the shadow of repose, others, again, in bright light, teeming, full of life, we can understand how ideation can go on by vicarious and alternate energy of the several clusters.

In dreaming, the swiftness of thought and the rapidity of sense-perceptions are somewhat marvellous. Processions that would occupy an hour to pass in the real world go by in a few seconds, and years are curdled into moments, as in persons in instant danger of death.

Somniloquy is, probably, always an outcome of dreaming. This term does not mean the rambling word or words that bubble out in sleep, but intelligible sentences, often telling of the rude commotion that makes the night's dismay.

"Indicioque sui facti persaepe fuere."

"when infected minds

To their deaf pillows will discharge their secrets"—

the unpacking in words of a guilty conscience.

Somnambulism is an acted dream, and hallucinations are dreams of waking life.

Heerman and Dr. J. Jastrow have studied the dreams of the blind, and found that such as lose their sight before five to seven years—the critical blinding age—never dream in visual terms, whilst those who become blind after this period all have dream vision. Dr. Jastrow believes, from data furnished by the examination of two hundred blind, that they dream less than

the sighted, and most in terms of hearing; next, from sensations furnished by touch, their master sense; and a few in terms of taste and smell. Reading the raised type with the finger never happens in their dreams. The boys dream of playing, running, jumping, and so on; the men of broom-making (in terms of motion and feeling, and not of sight), piano-tuning, teaching, and the like; the girls and women of sewing, fancy and household work, &c.

The dreams of the deaf-mute are still a virgin field. Prof. G. Stanley Hall has studied the dream life of Laura Bridgman. He says her sleep is constant dreaming. The tactual-motor sensations, by which she receives her mind food and communicates with her fellow beings and gets her knowledge of the external world, chiefly supply her dream food. She will suddenly talk a few words with her fingers, too rapidly and too imperfectly to be understood, never making a sentence. All the people that enter into her dreams talk with their fingers. Sight and hearing terms are absent, or, strictly speaking, vague, and more likely to be akin impressions—heat and jar. In her journal, the terms of sight she uses show great limitations of her notion of this sense. She speaks of hearing with her feet: "I placed a little chair before me. I put the musical box on it, so I could feel it play with my feet."

A few days ago, Mr. Thelwall, a surgeon at Farndon, Chester, on having his attention drawn to a man who had leaped over Farndon Bridge into the Dee, at once plunged into the river, and after great difficulty succeeded in rescuing the would-be suicide, who was then unconscious. Mr. Thelwall, however, successfully restored consciousness, and saved the man's life.

It was his first visit to the city. As he stood on the curbstone shaking his sides with laughter he was accosted by one of New Haven's finest: "What's the fun, stranger?" "Fun! Can't you see it? Just look how that thing (pointing to a watering cart) leaks; why the blame fool won't have a drop left when he gets home."

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Public Health

"Health is the first Wealth."—Emerson.

BREATHING-SPACES FOR LONDON.

LONDON is largely over-populated. In nine years (from 1872 to 1881) there has been an average increase of 8·3 persons to an acre. If this continues—and there is no reason to suppose that it will not—it is hardly false to predict that the health of the residents in the metropolis must deteriorate if more stretches of land be not secured free from buildings. These breathing-spaces would not merely benefit the comparative few who dwell in their immediate neighbourhood, but would mitigate the airlessness of the whole city, more especially if trees and shrubs were planted to supply the necessary ozone.

With this object in view, the Metropolitan Public Gardens Association was started, and in the four years that it has been working it has succeeded in securing for the public forty-six open spaces in different parts of London. Of these, ten are playgrounds and thirty-six "gardens," which last were little worthy the name till they were taken in hand by Miss Wilkinson (Landscape Gardener to the Association), as they were mostly either locked-up, deserted-looking squares, or exceedingly neglected disused burial grounds. If the latter, the first step was to obtain a Faculty, which generally permitted the removal of such tombstones as no one put in a claim to have kept. These stones, after being carefully numbered, were placed against the walls and well planted out; turf was laid, paths and plantations made, and a good number of seats placed.

In all the gardens there are fountains, both drinking and ornamental, and, as every season comes round, bright flowers are put in the beds.

Much, however, yet remains to be done. Almost daily new houses spring up (their rate of increase being computed at between six and seven thousand a year), and that means so many more individuals and chimneys to absorb and corrupt the already impure air. Ground is so valuable, and flats for all classes so much in request, that many of the houses are built with a vast number of storeys, which tend to prevent the free circulation of air through the streets. Think of the enormous Hankey and Queen Anne's mansions, and also of the numerous and large artisans' dwellings that are scattered about London—in Lisson-grove alone there are five such blocks of flats for the working classes. Or take those in the East End—say in Red-cross-street, Southwark. Here the street is exceedingly narrow, and the air particularly stifling, till you get to a tiny garden (flanked on three sides by houses) which the Kyrle Society has obtained and laid out for public recreation. It is particularly useful, being situated opposite many-storeyed flats, and in a neighbourhood where most of the houses are far greater in height than the street is in width. In London, distances are so great that the number of open spaces needs to be correspondingly great that the densest and most thickly-populated quarters may be, at least, healthily habitable to all who cannot afford the spring or autumn change of air.

According to the statistics compiled by Mrs. Holmes, we find that at one time and another at least 443 burial grounds have existed in London. Of these, only 69 are open to the public; 116 have been completely built over (happily, by the Act of 1884, the erection of buildings on such spots has been forbidden, except for the purpose of

enlarging the places of worship); 88 have been absorbed for various purposes (stable-yards, private gardens, &c.); 23 are still used for interments; and the remaining 197 are closed.

For children, almost more than grown-up people, an abundance of light and air, and especially space to run about in, is necessary. If this necessity were satisfied, we should not see so many pinched, stunted bodies, with old-looking young faces about us. A most striking example of the steady deterioration of the physique of this generation is to be found in the report of the Inspector-General of Recruiting. In 1883, out of every thousand men who offered themselves for medical examination, 396.98 were rejected. This number rose the following year to 416.97, and again two years later to 438.09; making in four years the serious increase of 41.11 of under-sized, ill-developed, or unhealthy recruits. There are no less than 80 acres of playground in possession of the Board Schools; but only nine of these grounds are open on Saturdays, through the exertions of the Metropolitan Public Gardens Association, which has obtained funds from private individuals for that purpose.

Whenever a garden is sufficiently large, as in the New Park of fourteen acres at Camberwell, a piece of it is set apart for the use of children only. These playgrounds are simply asphalted or gravelled (sometimes a few trees are planted), and seats, giant-strides, swings, and parallel bars are placed. Caretaker-gardeners are provided in all open spaces, those in the children's grounds being able to teach, at stated times, elementary gymnastics.

Besides the serious danger of used-up air to the bodily health of all Londoners, there is the depressing and degrading effect upon the minds of those who have to spend their entire lives with a very occasional glimpse of the country to refresh them. Most people will allow that good work of any kind cannot be accomplished by perpetual grind. The brain gets wearied and the body worn out, and if Jack is not to become the proverbial "dull boy," he must have a certain amount of relaxation of one sort or another. Now, after a hard day's work, say, in a factory, or driving an engine, perhaps one of the most entire and healthful rests is to get quietly away from the jarring of voices and rush of wheels, in a park or open square.

If in some densely-populated neighbourhood you walk through any of these gardens (in the early spring, or right through the summer and autumn, till it is too cold for the scantily-clad to sit in the open air), you will find them crowded with all manner of people who have come to snatch a little quiet to set them up for the next day's work. Little children are there all day, and as the afternoon wears on, they are joined by the tired, hard-worked elder folks, coming to pass a few happy hours with their families in the enjoyment of these pleasant makeshifts for green fields and pastures new.—*Emmeline Wood Sieveking in "Public Health."*

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EFFECT OF IRRIGATION ON HEALTH.

WHEN a country, says the *Sanitary Engineer*, having scanty vegetation and a sparse population because of the small amount of rainfall, is improved by the construction of works for systematic irrigation for agricultural purposes, the change in the surroundings is sometimes very striking.

Grasses, grains, and fruits can be raised with profit, the population becomes denser, and sickness and death become more frequent. The question as to how far a system of artificial irrigation by means of canals, &c., is necessarily injurious to the health of those living in the vicinity is an interesting one, but there is little definite information in existence with regard to it.

When we came across a paper read before the Society of Arts in London by Surgeon-General Bellew, of the India Service, on "the injurious effects of canal irrigation on the health of the population of the Punjab and their remedy," we hoped to find in it something definite and practical, but must confess to disappointment.

Dr. Bellew resided in the Punjab for thirty years, and states as the result of his personal experience that wherever canal irrigation has been introduced in that province, there the health of the people has deteriorated more or less, whilst in some tracts where the land has become water-logged through defective drainage, this injury has become well marked.

No statistics are offered in proof of these statements, for the reason, as given, that such statistics would be misleading, although the death-rates are generally higher in the canal-irrigated districts than in the others. The author seems to think that the evil results consist not so much in an immediate raising of death-rates as in gradual deterioration of the race. He says that in many places where formerly they were little troubled by sickness, and epidemic visitations of cholera and fever were matters of rare occurrence, now they are never free from sickness of one sort or another, while epidemics of some kind occur almost every year. The old men lament that though trade has greatly increased, though vast tracts formerly waste and waterless are now traversed by irrigating canals, and produce vegetation and trees formerly unknown, yet that the people are poorer than they used to be and also less healthy.

It does not appear, however, that this increase in sickness is directly connected with irrigation. The increase in density of population and in poverty, the effects of insufficient clothing, of bad houses, &c., seem quite sufficient to explain increased sick-rates. Much is said by Dr. Bellew about obstructed drainage as a cause of disease, and certainly, taken in connection with tropical temperature and vegetation, it gives the conditions for the development of various forms of pernicious fevers, but surely this obstructed drainage is not necessarily connected with irrigation. The whole paper is a pessimistic one, and it is to be hoped that those who have charge of sanitary engineering works in India will not be influenced by it.

A physician who in the year 1888 argues that typhoid fever may be produced by "a succession of chills contracted at dinner parties," or "in dormitories," is certainly not one whose opinions on sanitary matters are entitled to respect, although he may be a most worthy old gentleman, whose lamentations for the good old times we can readily understand though we do not sympathize with them.

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew dotting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—Charles Mackay.

THE TONGUE AND SPEECH.

FROM tolerably early times the notion that the tongue was essential for the purpose of speech held its own as a paramount idea of physiology, popular and technical alike. There is placed on record the account of certain Emirs who had undergone an old and much-favoured form of torture—namely, that of having their tongues cut out; as these men were afterwards found to be capable of speaking, the theory was advanced that their tongues had grown again, and thus enabled them to articulate. We know that growth of the tongue after excision or mutilation of the organ is an anatomical impossibility, and the incident just related, if it be true at all, is explicable on other grounds, as we shall presently note, than these which rest upon the idea of a new growth of the organ of taste. It is necessary, first of all, that we should distinguish between speech as a mental faculty—that is to say, as an exercise of the brain and mind—and speech as a mere matter of articulation.

In the first instance, speech, or, as it might more properly be named, language, is the result of mental concepts and operations of a complex character. In the latter case, it is a mere mechanical or muscular matter of moulding the sounds produced by the voice-organs into words. Articulation, in which the tongue is concerned, is merely the transcribing, so to speak, of the true "language-ideas" of the brain into audible equivalents. As with speech, so also with writing. The expression of our ideas by the last-named method is closely akin in the nature of the acts involved to articulation. Writing is the mere visual transcription of the brain-language, as speech is its audible reproduction. Nor does nerve-physiology leave us in ignorance concerning the parts of the brain which are concerned in speech. There is a brain convolution situated, roughly speaking, above and in front of the ear and at the side of the forehead, which is known to be charged with the duty of supervising our language-faculties.

In the disease known as *aphasia* the patient knows what is said to him, and understands the words he hears, but is unable to frame words in reply. He has lost the power of speech. His tongue and vocal organs are intact and unaffected, but his language-faculty has vanished. As a rule, also, the aphasic patient cannot write; this mode of expressing thought generally disappears when the speech-faculty has become disordered. When the brain of aphasic patients is examined after death, it is the speech-centre already alluded to which is found to be diseased. Near to this speech-centre we find the working-centre of the brain, hence disease of the one part naturally includes disorder of the other. There appears to be no doubt as to his definite localisation of speech in the "third left frontal (or forehead) convolution" of the brain, as the part in question is named. We say "*left*," because as a matter of fact it is that side of the brain which is usually affected in aphasia. There is a right speech-centre unquestionably, but in ordinary persons it appears to be inoperative. The left side of the brain is the cardinal ruler of the body, for the reason that, as each side of the brain governs the *opposite* side

of the body, and as we are right-handed, so we must naturally be largely left-brained.

That "right-handedness" which excited the contempt of the late Charles Reade, depends upon our left-brained state, or at least on the greater activity of the left hemisphere of the organ of mind. Left-handed persons are conversely "right-brained," in the sense that their acts are largely ruled by the right side of the great nervous centre. We possess, it is true, a speech-centre in the right side of the brain, but this centre in ordinary folks seems to lie functionally dormant. Cases of aphasia which have improved and have come to exhibit a power of speech have occasionally been referred, as far as explanation is concerned, to the awakening of the right speech-centre into activity. Whatever the future of brain-physiology may show to be the exact relations of speech to its controlling centres, it appears to be tolerably certain even now that we are really one-sided in respect of many of our transactions. It may be, in truth, that a higher sphere of intellectuality, to say nothing of the ambi-dexterous advantages, awaits the race in which both hemispheres of the brain shall have been trained to perform an equal share in controlling and directing the bodily powers.

Returning now to the relations of the tongue to speech, we find a large number of curious facts regarding this subject collated by the Hon. E. Twisleton in a little volume bearing as its publication-date the year 1873. Among the records of old religious persecutions, speech, after excision of the tongue, was regarded as a veritable miraculous occurrence. Over and over again theological writers insisted that the power of speech under such circumstances could only be explained on the theory of supernatural intervention. This theory exemplified the common error of accounting for phenomena by an idea of far-fetched character, while a simpler and more natural explanation was at hand. An early case was that of Pierre Durand, a French lad of between eight and nine years of age. The account of this case is given in a memoir written by one Jacques Roland, a surgeon of Saumur, and published in 1630.

The title of this *brochure* is given as "Aglossostomography, or description of a mouth without a tongue, which speaks and performs naturally all its other functions." Pierre Durand, it seems, fell ill of small-pox, and this disease affected his tongue, so that in a short time the organ had disappeared. M. Roland testifies, in the course of an elaborate dissertation on the case, to the perfection wherewith the boy exercised all the duties of life in so far as his tongue was concerned. "This mouth without a tongue," he says, "has nearly acquired another conformation well adapted to those five actions (tasting, speaking, swallowing, &c.), in order to supply the needs of the tongue, by the admirable considerateness of nature, which never omits opportunities of letting itself be seen as a mother to her children." The next case is one recorded by one Dr. Nicholas Tulp, of Amsterdam. Tulp is the prominent figure in the famous painting by Rembrandt, entitled "The Lesson in Anatomy," preserved in the gallery at the Hague. The doctor, in the painting, is the exponent of anatomy, and holds the knife in his hand. He was born in 1593 and died in 1674, and was a person of note and fame in his day. He relates how a man named Joannes the Dumb resided at Weesp, near Amsterdam (the town which Van Houten, of cocoa fame, has made celebrated to-day), and how, in the course of a voyage to Italy, this man, having fallen into the hands of Turkish pirates, was incited to embrace the Mohammedan faith. Refusing to do this,

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MEDICAL PRESS, June 13th, 1888.

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Joannes was sentenced to have his tongue cut out, and that barbarous operation was duly performed, with the result that thenceforward he was unable to utter a word. Three years later, having escaped to Holland, Joannes recovered his voice as the result of a fright sustained through a severe thunderstorm. The fame of this occurrence naturally became noised abroad. It was clearly a case of nervous shock, caused, on the *similia similibus* principle, by a shock of another or analogous kind. Thereupon Dr. Tulp proceeded to interview the hitherto voiceless man. The result of the interview convinced Dr. Tulp that Joannes was perfectly restored, as far as his speech was concerned. He not only distinctly spoke, but, likewise, adds the doctor, pronounced "accurately one and all the consonants, the enunciation of which is attributed by the most sagacious investigators of nature to be the tip of the tongue alone."

In 1718 a memoir was presented to the French Academy of Sciences on the case of a girl who, without a tongue, spoke perfectly, and appeared to suffer no inconvenience from her lack of the organ of taste. M. de Tussien, of botanical fame, presented the report, which states that the girl was born minus a tongue. She was fifteen years old when Tussien examined her, and answered all his questions intelligently and clearly. The tongue was absent save for a small projection. She spoke distinctly, and while pronouncing all the letters of the alphabet clearly, it was noticed that certain letters (C, F, G, L, N, R, S, T, X, and Z) were sounded with greater difficulty than the rest. Taste appeared to be perfectly exercised, but the duties of mastication and swallowing were not so readily discharged. Tussien's conclusion was "that the parts enclosed in the mouth are so necessary to the act of speech that they can in this function supply the absence of the tongue." In England, in 1742, the case of Margaret Cutting was investigated. She was born at Wickham Market, in Suffolk, and lost her tongue when about four years old as the result of malignant disease. The Royal Society of London investigated the case, and published a report thereon in the year just named.

This girl pronounced "letters and syllables very articulately; the vowels she pronounced perfectly, as also those consonants, syllables, and words that seemed necessary (*sic*) to require the help of the tongue, as *d, l, t, n, r, at, al, ath, ash, cha, la, ta, ja*." The observers noticed that the words ending in *ath* she pronounced as *et*, and as *emb, ad* as *eib*; but they found that it required "a nice and strict attention to observe even this difference of sound." The girl also sung "prettily, and pronounced her words in singing as is common." Margaret Cutting herself wrote on one occasion that she could "speak very well," and there seems to be no reason to doubt the truth of her assertion. In our own day cases in which perfect speech has been carried on *minus* the tongue are by no means rare.

A case was reported by Mr. Nunneley, surgeon, of Leeds, in which he operated for removal of the tongue in 1861. The patient reported in 1862 that he could "pronounce all vowels and consonants without difficulty, but not so clear since the operation." He had no difficulty in swallowing. The letter he experienced most difficulty in pronouncing was T, but that letter he could pronounce when he took pains. At first the letter Q gave him some trouble, but he soon recovered the power of pronouncing it. Professor Huxley subjected Mr. Nunneley's patient to a close examination, with the result of finding that the only consonants he was "wholly unable to pronounce were *l's* and *d's*, initial and final. When initial, they

were converted into *f, p, v, sh*; when final they ran into the same letters. *Tin* was pronounced *fin*; *toll* became *pool*; *tack, fack* (or *pack*); *dog, shog*; *dine, vine*; *dew, thew*; *mad, madf*; *cat, calf*. Initial *g's* and *k's* were well pronounced. Final *g's* were all more or less guttural, like the German *ch*." Professor Huxley's opinion was summed up in the words that, "listening carelessly, you notice an odd lisping impediment in his speech, like that of a person who has lost part of his palate, and that is all."

The cases already quoted will more than have justified the idea that the common notion of the tongue being absolutely essential for speech is erroneous and incorrect. Further cases reported by the late Professor Syme and Sir Jas. Paget testify to the same end. The cases just quoted are also interesting from that view of matters which suggests how quickly and perfectly the adaptive power of nature intervenes in cases of defect or injury to perform by new and ingenious ways and means the functions of the lost and missing parts. This principle of adaptation is no new thing in the history of science. Contrariwise, it is seen in every action whereby a living being fits and adapts its life to the exigencies of any novel or untoward circumstances. In this light, the fact that the tongue is not absolutely essential for speech only bears out a wider maxim of biology—that which declares that the success in life of a living being largely depends on its power of adjusting itself to its environments, and of accommodating its structure and functions to the calls which an altered existence may make upon them. This, in short, is only another and scientific fashion of stating the value of that quality which makes the best of even the worst things of life, and of that spirit or tendency which bravely fights on in the inevitable struggle for existence that awaits all living things.—*Glasgow Herald*.

REFLEX SPEECH.

Acts performed at first with great effort, by constant repetition become so thoroughly ingrained in the nervous system that they are performed without the slightest effort, or even may be performed in spite of a more or less strong effort to resist them. When this occurs, an originally voluntary act is said to have lapsed into the automatic or reflex stage; the act has become mechanical; and pressing the proper key will produce the appropriate re-action.

In a recent issue of the *Journal of Mental Science*, Dr. G. M. Robertson calls attention to the fact that there exists a large number of colloquial phrases that have become automatic. Speech, though at first learned with great difficulty, becomes the most natural channel for expressive movements. We are daily asked, "How are you?" and as frequently reply, "Very well, thank you." And the best proof of how very automatic and unreflective this answer is, is given by the innumerable cases in which this is said even when we are not well. This is present in a perfectly healthy mind, but it remains obscured.

When we are excited or confused, or, better still, absent-minded, the phenomenon becomes more prominent. Ask an absent-minded friend, "How are the family to-day?" or "How is your brother Tom?" and he tells you, "They are well, thanks"; and immediately adds, "What have I been saying? Why, my father is laid up with gout," or "Tom has broken his arm."

All reflexes are controlled in health, but appear in exaggerated forms in disease. This speech-reflex becomes

very marked in dementia, where there is a gradual breakdown of the mental structure, and, as is the universal law, the highest, least stable products are the first to decay. The power of intelligent speech is lost or enormously reduced, but the more deeply acquired habit of automatic responses is retained. One such demented patient showed practically no intelligence; he never even asked for food or drink. He underwent a severe surgical operation without saying a word, but his reflex speech was preserved. Here are samples of it: "How are you?"—"Oh, just about the ordinar', thank ye."—"How are you feeling to-day?"—"Oh, pretty weel, thank ye."—"How's all with you?"—"I'm doin' pretty weel."—"You're not so well to-day?"—"I don't think I am."—"How's the wife this morning?"—"Oh, she's very weel, I'm thinkin'."—"Will you take your hands away?"—"Yes, I'll do that." Intelligent though these answers seem, they were not so; for he was all the while suffering from a serious illness, he knew nothing about his wife, and though he promised to keep his hands away, he did not do so.

Another patient, named Ross, though chattering all day, had really no intelligent speech. Within a minute he would say such incoherent nonsense as, "If you would just come be! Oh, dear, dear! Oh! that is the whole clash. That's what! Oh, dear, dear me!" and so on. The only phrase with meaning here was "dear me!"—a reflex phrase. But in such simple talk as the following, Ross could take a part: "Well, Ross?"—"Weel, sir."—"How are you?"—"Very well, sir."—"It's a fine day, Ross."—"It is that."—"Ross?"—"I hear, sir."—"You're not well to-day?"—"Oh! I don't know."—"Good-bye, Ross!"—"Good-bye, sir!" The attendant could not get a sensible word out of him, and was much surprised to hear how well the patient could talk to Dr. Robertson, neglecting to notice that the latter was careful to ask for reflex phrases.

In some cases the answers will not be appropriate to the query. "It's a rainy day," will be answered by "No, I'll no do it"; "What day is this?" by "Oh! but that is not right"; and so on. From his study, Dr. Robertson concludes (1) that actions seemingly intelligent may be mainly automatic, or reflex; (2) that in speech we have present all the causes leading to a reflex action; (3) that in health such speech-reflexes are exhibited, but under special circumstances they come into prominence; (4) that in some forms of mental disease this reflex is exaggerated; and (5) that the path of reflex speech is well organized, and strongly resists destruction.

JAPAN WAX is obtained from a tree, *Rhus Succedanea*, which is found in Japan, China, and throughout the East Indies generally. In the Japanese language it is called *haje* or *haze*. The tree commences to bear fruit when five or six years old, and increases its product every year, till at fifty years a single tree will produce 350 lbs. of berries, from which 70 lbs. of wax can be obtained. The wax is formed in the middle of the berry, between the seed and the skin, like the pulp of a grape. It is extracted by boiling the berries in water, and allowing it to cool, when the wax separates out in a solid cake. The specific gravity of this wax is 0.970, and its melting-point 131 deg. F. It is largely used, either alone or mixed with tallow, by the Chinese in the manufacture of candles. The principal port of export is the city of Osaka, whence, in 1876, nearly 2,000,000 lbs. of the wax were shipped to London.

Findings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

The Treatment of Sleeplessness.—Recipes for sleeplessness continue to present themselves. A fortnight ago we discussed the suggestion of a sufferer from this uncomfortable symptom who relied upon a species of artificial dreaming as a means of relief. Another of the same unfortunate class has found the following to be an effectual remedy in his own case. After taking a deep inspiration he holds his breath till discomfort is felt, then repeats the process a second and a third time. As a rule, this is enough to procure sleep. A slight degree of asphyxia is thus relied on as a soporific agent, but the theoretical correctness of this method is somewhat open to question. Certainly there is proof to show that the daily expenditure of oxygen is most active during the waking period, and that nightly sleep appears to coincide with a period of deficient tissue oxygenation. It is at least as probable, however, that other influences are associated with the production and timely recurrence of sleep besides that just referred to. This plan, moreover, however effectual and beneficial in the case of its author, is not without its disadvantages. The tendency of deficient oxygenation is to increase blood pressure and to slow the heart's action. With a normal organ, as an occasional occurrence this might not be of much consequence. If, however, the impeded heart should also be enfeebled by disease, the experiment might be repeated once too often. Another combatant in the struggle with insomnia lays down a series of rules, for the most part very sensible, to which he pins his faith. Considering that the chief causes of sleeplessness are mental worry and the want of a due amount of exercise and fresh air, he advises his fellow sufferers to observe the ordinary rules of hygiene relating to such matters, to take food and drink in moderation, and to avoid of an evening the use of tea, coffee, and tobacco. In dealing with severe nervous irritation from mental or physical work, he has found a daily rest an almost essential prelude to sleep at night. Thus, he treats of sleeplessness rather as a tendency requiring constitutional remedies than a symptom of mere brain excitation. There is much to be said for his theory and means of treatment.—*Lancet.*

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The Opium Habit in America.—I was surprised to learn how extensively opium and its alkaloids—particularly sulphate of morphia—are used by physicians. I found them prescribed for every ailment which flesh is heir to. They are used for headache, sore eyes, toothache, sore throat, laryngitis, diphtheria, bronchitis, congestion, pneumonia, consumption, gastritis, liver-complaint, stone in the gall-duct, carditis, aneurism, hypertrophy, peritonitis, calculus, kidney trouble, rheumatism, neuralgia, and all general or special maladies of the body. It is the great panacea and cure-all. During my leisure-time I have looked up more than 10,000 recipes. It has been my practice to go to the files, open the book, or take up a spindle at random, and take 300 recipes just as they come. The first store I visited I found 42 recipes which contained morphine out of the 300 examined. Close by, a smaller store, patronized by poorer people, had 36. Up in the aristocratic quarters, where the customers call in carriages, I

found 49 morphine recipes in looking over 800. At the North End, among the poor Italian labourers, the lowest proportion of 32 in 300 was discovered. Without detailing all the places visited, I will summarize by saying that in 10,200 recipes taken in 34 drug stores, I found 1,481 recipes which prescribed some preparation of opium, or an average of fourteen and one half per cent. of the whole. This was surprising enough; but my investigations did not end here. Of the prescriptions furnished by physicians I found that forty-two per cent. were filled the second time, and of those re-filled twenty-three per cent. contained opium in some form. Again, twenty-eight per cent. of all prescriptions are filled a third time; and of these, sixty-one per cent. were for opiates; while of the twenty per cent. taken for the fourth filling, seventy-eight per cent. were for the narcotic drug, proving, beyond a doubt, that it was the opiate qualities of the medicine that afforded relief and caused the renewal. From conversation with the druggists, I learned that the proprietary or "patent" medicines which have the largest sales were those containing opiates. One apothecary told me of an old lady who formerly came to him as often as four times a week and purchased a fifty-cent bottle of "cough-balsam." She informed him that it "quieted her nerves" and afforded rest when everything else had failed. After she had made her regular visits for over a year, he told her one day that he had sold out of the medicine required, and suggested a substitute, which was a preparation containing about the same amount of morphine. On trial, the woman found the new mixture answered every purpose of the old. The druggist then told her she had acquired the morphine-habit, and from that time on she was a constant morphine-user.—*V. Eaton, in "Popular Science Monthly."*

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How Long One can Remain Under Water.—The length of the time during which a person can remain under water without choking—a subject on which exaggerated stories have been told—has been studied by M. Lacassagne. The author was favoured with an opportunity to examine Captain James, a celebrated diver, whose exploits have excelled those of all his rivals. He pretended to be able to continue four minutes and fourteen seconds under water. He contended once in England for a prize which was offered to any person who could endure five minutes, but was compelled by a hæmorrhage of the nose and ears to rise at the end of four minutes. He had also swum under water during the same time a distance of one hundred and fifty metres. He was accustomed before plunging to expel all the air from his lungs and take a strong inspiration. In the water he swallowed on the average about a litre of the liquid. When he came out of the water he snorted enormously. In one of the experiments to which M. Lacassagne subjected him, the movements of the heart became slow, irregular, and feeble at the end of two minutes; and on his coming out at the end of two minutes and thirty-seven seconds, his face was congested and his eyes flushed. Important facts in the experiments were that in his full inspirations previous to plunging Mr. James swallowed air, and while under the water a considerable quantity of saliva; and that his respiratory movements did not cease during immersion, but continued ample and regular at the rate of twenty a minute, while the thoraco-abdominal cavity diminished at a gradual and regular rate. M. Lacassagne explains these circumstances by supposing that inspiration under water draws into the lung the air contained in the

pharynx, which in turn draws from the air which has been swallowed into the stomach. This organ becomes, then, in the diver a reservoir of air. It is evident from these observations that if persons who have been trained to diving cannot remain under water more than four minutes without exposing themselves to great dangers, drowning men who struggle and inspire water can endure so long only under extremely favourable circumstances. The lesson is also taught that divers should not inflate their lungs before plunging, but should swallow air, which then passing from the stomach to the lungs will support respiration during a definite period of immersion.

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Railway Carriage Accommodation.—None of us can afford to be indifferent to the controversy which is now being carried on with reference to the developments of railway travelling and the accommodation provided for passengers. One effect of the increased rate of speed, which is not entirely limited to the Anglo-Scottish lines, is an increased demand for lavatories in connection with the carriages. In opposition to this demand, it has been said that the time spent between halting-stations is no greater than before. This may be true, but the difficulty is not therefore to be regarded as settled. We have also to remember that the halts at stations are less frequent and of shorter duration than formerly. Again, it is objected that lavatories in sufficient number to be of general use cannot be supplied at the present cost of carriage. This objection is not difficult to comprehend, and it furnishes an argument in favour of the system of communication between carriages approved in America. For more reasons than one, this arrangement has not been very favourably received either by the British public or the railway companies. Possibly, present conditions may bring a change, and John Bull become willing to forego his habit of seclusion in order to do away with a substantial inconvenience. Another matter well worthy of attention at all times, and especially in the event of any long continuance of the racing mania, is the question of food-supply on railway trains. Where is the traveller who has not over and over again supped or dined miserably at a railway station, amid the din of traffic, the worry and uncertainty of shuntings and changes of train, and while enduring the cruel comfort of indifferent fare consumed in haste and purchased at a round cost? Of the class of Pullman cars, those which afford refreshments are said to have proved most successful in this country. It might be worth while for the railway companies to try the experiment of catering for the wants of passengers on a more extensive scale. This arrangement, however, in order to work properly, would require the adoption of the system of inter-communication. If, as we are led to believe, the future construction of a train will consist in its division into only two classes of carriages, it may yet be found feasible to provide in a given train two refreshment-cars, one for each of these main divisions. The requisite communication between carriages might not improbably be found to agree with the views of a majority of travellers. At all events, the experiment deserves a trial.—*British Medical Journal.*

"YOUNG man," he said solemnly, "what would you think if I should put an enemy into my mouth to steal away my brains?" "I would (hic) think, sir," hic-coughed the young man, "that you were going to an unnecessary expense."—*N. Y. Sun.*

IMPORTANT ANNOUNCEMENT.

BONUSES TO SUBSCRIBERS TO "HEALTH."

HEALTH, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Book-stalls, on the day of publication. It may also be ordered from the PUBLISHER, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain HEALTH from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following FREE GIFTS and BONUSES to all who subscribe to HEALTH for one year or longer:—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of HEALTH, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of HEALTH weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of HEALTH so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of HEALTH, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, "Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to anyone who succeeds in obtaining three yearly subscribers to HEALTH, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with HEALTH should be addressed directly to the PUBLISHER, 2, Paternoster-square, London, E.C., and *not to the Editor*.

The police authorities in Liverpool have recently made most laudable efforts to suppress the very serious nuisance caused by the posting up of the indecent bills issued by quack doctors in urinals and on walls, as well as distributed in the streets. On two different occasions a man charged with this offence has been fined forty shillings, or in default a month's imprisonment. It is to be hoped that the principal offenders may be reached and punished. The nuisance caused by these bills has attained most serious proportions, mainly in consequence of the apathy and indifference of the public and the authorities. The law, moreover, was defective, and a more stringent local Act had to be passed before the evil could be effectually dealt with.

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(TRADE MARK.)

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FOR the CURE of NERVOUS DISEASES.

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THE ACADEMIE DE MEDECINE of Paris and

FORTY MEMBERS of the

ROYAL COLLEGE of PHYSICIANS of LONDON.

RECENT TESTIMONIALS.

GALVANISM and SLEEPLESSNESS and PAINS in the LEGS.

Caterham, Surrey, August 9, 1888.
Sir,—I have much pleasure in sending you word that your Galvanic Belt has quite removed the severe pains in my legs which I suffered from, and I can now sleep well at night. My bladder is much stronger, and I am better in every way, and I consider your treatment the greatest blessing. I shall recommend your Belts to every one.—Yours faithfully,
J. L. Pulvermacher, Esq., 194, Regent-street, W. JOHN SCANLON.

GALVANISM v. RHEUMATISM.

39, Linaker-street, Southport, August 4th, 1888.
Gentlemen,—In May last I purchased a Galvanic Belt from you for Rheumatism, and after wearing it for three days, to my astonishment I could point my foot and walk with it, and now I can walk a couple of miles and can get both my hands over my head.
I am in my seventieth year, and before I used your Belt I had great difficulty in walking across the room, and could only just get my right hand to my mouth to feed myself, but I could not touch my lips with my left hand, and despair seemed to be getting fast hold of me.—Yours gratefully,
D. CORDINGLEY.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM v. NERVOUS EXHAUSTION.

11, Magdalen-terrace, Ripon, 19th July, 1888.
Dear Sir, I ought to have written to you before to tell you that I am now quite well again, and I have not the least doubt that your Galvanic Belt has done me a wonderful amount of good. I only wore it for two months, when it quite restored me. I recommend your treatment wherever I can.—Yours very truly,
J. J. SIMPSON.

J. L. Pulvermacher, Esq., 194, Regent-street, W.

GALVANISM v. NERVOUS DEBILITY.

67, Huskisson-street, Liverpool, July 10th, 1888.
Dear Sir,—I have been really impatient to tell you of the good results of your treatment in my case.
An improvement began the day I put the belt on, and with trifling exceptions I have not suffered from that excessive weakness since.
I feel quite enthusiastic about your method, and have strongly recommended it to my friends.—Yours faithfully,
A. BROADFOOT.

J. L. Pulvermacher, Esq., 194, Regent-street, W.

GALVANISM v. NERVOUS DEPRESSION.

High-street, Borough, S.E., July 4th, 1888.
Gentlemen,—I am pleased to inform you that your Galvanic treatment has greatly benefited me, in giving me renewed energy, and I am now quite free from the nervous depression which I experienced so much before wearing your Belts. My sleep is sound and refreshing, my bowels are regular, my appetite good, and my appearance much improved in every way.—Yours respectfully,
E. CATNE.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM v. INDIGESTION.

Deans Hospital, Westoe, South Shields, June 26th, 1888.
Gentlemen,—I am pleased to say that I have received great benefit from your Galvanic Stomach Belt. I am now able to take my meals regularly and without those disagreeable symptoms I was hitherto subject to, and your treatment has toned up my general nervous system.—Yours truly,
Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W. J. S. COOPER.

GALVANISM v. LOSS OF NERVE POWER.

Oxton, Birkenhead, June 25th, 1888.
Dear Sirs,—It is only due to you to state that your Galvanic Combined Band has been very effective in restoring nervous power to my daughter, for which she is very grateful.
I have much pleasure in frequently recommending your appliances, having witnessed their effectiveness in so many instances in my own family.—Yours faithfully,
H. HOPE.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

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FOR FURTHER TESTIMONIALS, both Medical and Private, see new Pamphlet, "GALVANISM: NATURE'S CHIEF RESTORER OF IMPAIRED VITAL ENERGY," post free on application to

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"Conference [maketh] a ready man."—Bacon.

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. Those intended for the Publishing Office to be sent to MR. A. P. WATT, THE PUBLISHER, at the same address.

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. All questions are answered free of charge in the columns of HEALTH.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," and to no other address.
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and not to the Editor.]

A. HANDS.—Wash your head once a week with tepid water and Bayley's Spermaceti Soap (17, Cockspur-street, Pall-mall, London, S.W.), and rub into the hair-roots each morning a little glycerine of borax. Avoid all hard brushes and small combs. Thereafter use a little Brilliantine as a hair-dressing.

G. ALLAN.—Try a vegetable dietary, and take stewed fruits, apples, or oranges, &c., and whole-meal bread, with Grant's Oat Flour and Dahl's Cakes for supper and breakfast; avoid tea and coffee; take Cascara Cordial, twenty drops in water, between meals, once or twice daily.

C. P. P.—Sponge with cold water each morning; sleep on a hard mattress; take plenty of open-air exercise, and avoid fluids and suppers late at night.

LAUDER.—Exercise should never be used so that it is liable to incur risk of any kind. No person troubled with hernia should take to exercise of any kind without first consulting a surgeon. Certain cases of hernia are compatible with cycling, but all should be first submitted for a surgeon's opinion.

NEPOTA.—In such a case, we advise you to consult a good surgeon in your city. We can send address of such, if desired, on receipt of stamped addressed envelope. In such an injury as that you have suffered, although there may be nothing very serious, yet a personal examination of your knee is necessary for judging of its exact condition.

G. MAX.—Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and learn therefrom the true rules of health.

L. C.—Take fifteen drops Fer Bravais in water after your meals, thrice daily; avoid beer and all stimulants; continue the Vichy

IS YOUR BLOOD ALL RIGHT?

As much blood passes through the kidneys as through the heart.

There is nothing startling about this fact, except it be a revelation. Many people have but a dim idea of the real work of the kidneys. They not only drain the water from the system, but also the poisonous matter which that water holds in solution to carry out of the system. Over half the time, however, the kidneys fail to do this work!

What is the result? Gradual failure of strength and health, and eventually death by Bright's disease, or some unsuspected kidney disease. You had better have a care! Kidney poison is accumulating in your blood. Tonics won't do any good; they only treat effects. You can only secure a radical and thorough renovation of the system by the prompt use of Warner's SAFE Cure, which is the only reliable, scientific specific for the blood, because it is the only known specific in the world for all forms of kidney derangement, and the kidneys, as stated, are the only great blood purifiers.

Mrs. Thomas Jolliff, The Quay, Polperro, Cornwall, suffered for four years from a complication of diseases caused by inactive kidneys. Her body was covered with black spots the size of one's hand, her skin became scaly and finally peeled off entirely. Her medical man said her trouble was from blood poisoning. She could get no relief, and was regarded as a curiosity. She took Warner's SAFE Cure, her skin became clear and white, and not a sign now remains of her former trouble.

Mr. Robert Spurr, Newgate, Pontefract, was a victim to disease caused by kidney-poisoned blood for ten years. He could get no permanent relief from the doctors, and began to lose heart. One day a friend advised him to use Warner's SAFE Cure. He did so, and experienced relief. The pain left him, and he recovered his health.

The above two cases are as good as a hundred. They prove what is stated, that the organs that remove the impurities from the blood are the kidneys, and that when impaired there is but one sound, rational method of treatment, and that is with Warner's SAFE Cure, which can be procured of all chemists at 4s. 6d. per bottle, or of H. H. Warner & Co., 86, Clerkenwell-road, London, E.C.

Water; and avoid much flesh food. Take vegetables in plenty; and let us hear the result of this treatment. Avoid pastry, salt foods, and cheese.

JUSTUS.—Our experience in your case is, that if you can only be persuaded to take your thoughts completely off your troubles and to take reasonable care of your general health, you will completely recover. You think too much about your physical state. Simply ignore your troubles, as you may well do, take plenty of generous nutriment, open-air exercise, and a tepid sponge bath each morning.

D. R.—Try taking fifteen drops Fer Bravais after your meals, thrice daily, in water, and try the following gargle: Tannin, one drachm; camphor-water, six ounces. Label: "Use a little as a gargle frequently." A surgeon will alone be able to advise you further, after examining the throat.

S. P. G.—Sit and rest with your feet elevated, so as to favour the return of the blood in the veins. Have the foot of your bed also elevated. Avoid constipation above all else, as this is a frequent cause of varicose veins; as, also, is long standing in business. You should get a surgeon to show you how the elastic bandage (see that you use one of Dr. Martin's) is to be applied, as much depends upon the exact fashion in which the bandage is used.

E. F.—The disease you name is epilepsy. In its true nature this is a disease of the nervous centres. You cannot treat the child yourself. See a physician at once.

S. S. S.—The description shows that the trouble is one of the chest. The case, we should say, is one for a mild climate, at any rate; but you should be guided by medical advice in the matter. If you desire a further and competent opinion, we can send you address of a London specialist on receipt of stamped addressed envelope.

B. LAW.—Try the effect of taking twenty drops of Cascara Cordial in water an hour before your breakfast, and repeat the dose, if necessary, in the afternoon. This will remove the constipation. As to diet, give up tea and coffee, and for breakfast and supper substitute Scott's Oat Flour. For the rest, let your diet be light. Take as much open-air exercise as possible.

W. W.—Read the pamphlet recommended to "A. G. S." in the present number, and follow out the directions given therein in respect of tonics, cold sponging in the morning, &c. What you name is not uncommon, especially after a period of

inactivity; and on a second attempt you will find the natural action restored in all probability.

R. S. S. S.—Certainly, follow the physician's advice, as it is most sensible and will probably do you good. Use the battery regularly, for a time at least. You might also receive benefit by taking a dessertspoonful of Scott's Cod Liver Oil Emulsion after your meals, thrice daily. Try a cold, or tepid sponge bath each morning.

CLUBLAND.—You must inform us more exactly regarding your life and habits before we can answer your question. Are you exposed to any source of infection? The regular recurrence of the ailment cannot be dealt with without full information concerning food, habits, &c. Supply this, and we will assist you.

G. S.—Yes, favourable, provided the season was not too cold. Catarrh, as a rule, benefits greatly from change of air to such a place, which is more bracing than your present residence.

CONSTANT READER.—[Please use a more distinctive name in future.] The substance you name has certainly the qualities attributed to it; but we should not recommend you to take the preparation advertised in the manner you note. Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and you will find the tonic therein described and instructions given.

PRINTEMPS.—Read the pamphlet recommended to "Constant Reader" above, and employ one or other of the tonics therein recommended. You should sponge with cold or tepid water every morning as a health-giving and restorative measure. If not bettered, write again.

CHANCERY LANE.—[Please note proper address of HEALTH office—your letter was erroneously addressed.] The only sure treatment of "writer's cramp" is by means of massage, &c. A Mr. Wolff, of Wimpole-street, W., has been successful in treating such cases under medical direction. Forward stamped directed envelope, and we will try to help the case further.

OMEGA.—Consult an eye-surgeon; there is likely some condition of the eyes which demands a thorough examination.

ABSTAINER.—Your regimen is a trifle too hard and vigorous for you. Take a glass of stout to dinner daily, and note the result. A voracious appetite is quite a common symptom of your class of cases, and a very slight modicum of such a beverage as stout will assist you to recover your health. Make the experiment, at least. You can

readily cease the stout if it does no good—in which case, write again.

A. W. G.—You must persevere with the treatment yet awhile. Take a tonic also: try a teaspoonful of Syrup of the Hypophosphites twice daily, after food, in a wineglass of water.

PONTIFEX.—Continue the tepid bath each morning, with friction afterwards; make it a daily habit, and add Tidman's Sea Salt to your bath. This is an excellent practice. The tonic ordered you should also be continued for a time. Try a glass of good stout daily to dinner. See advice given to "Abstainer" on this head in the present number.

G.—We cannot inform you of the composition of the medicine you name, but you could readily give it a trial, and note effects. Try hot salt baths at night occasionally.

A SEEKER AFTER COMFORT.—Yes; consult Messrs. Dowie & Marshall, West Strand, London, W.C., and they will provide you with hygienic boots.

G. POWER.—Use Bayley's Spermaceti Soap only for washing, and dust on the parts thereafter a little of Woolley's Sanitary Rose Powder.

M. A. G.—Give the child Henderson's "Perfect Food" Biscuits (advertised in our pages) regularly twice daily. For the rest, give plenty of new milk and a little strong soup daily. Marshall's Tritola should be used regularly in the form of puddings.

REBOR.—1. Apply at night a little pure white vaseline to the chin, and leave off shaving for a day or two, or shave on alternate days only for a time. If this fails, try the second lotion recommended to "Bida," in HEALTH No. 281. If this latter in unsuccessful write again. 2. Eat plenty of starchy and sugary foods, with a moderate amount of meat and fat, and after meals take a dessertspoonful of Scott's Cod Oil Emulsion. Plenty of milk and cream should also be taken.

NAVE.—Dr. Andrew Wilson's "Manual of Health Science" (Longmans & Co., price 2s. 6d.) would be a book likely to be useful to you.

BLACK COUNTRY.—We recommend you to rest absolutely at the periods named, to get a change of air to a mild seaside place (e.g., Blackpool) for a time, and to take to dinner daily a little nourishing stout. This last can be left off when you are well. You require change above all, with tonics. Take fifteen drops Fer Bravais in water, twice daily after meals. If constipation occurs (and by way of preventing it) follow advice given to "D." in last week's HEALTH. If not cured, write again.

E. PATERSON.—Try applying (night and morning) the resorcin ointment made as follows: Resorcin, one drachm; lanolin, powdered starch, and oxide of zinc, of each two drachms. Mix. Wash the part regularly with tepid water and Iodoform Soap.

PETER HAY.—Try Dahl's Cakes as a remedy for constipation. They are not drugs, but an admirable form of food and digestive aid combined. Nearly thirty.

G. A.—Howie's Filter, certainly. Try Mellins' Food, which is not farinaceous.

SINI.—Try the effect of taking a blood-tonic, e.g., fifteen drops Fer Bravais, thrice daily, in water, after your meals. For the rest, let your food be nutritious, and avoid overwork of mental and physical kind. Brand's Beef Essence should be taken for a time as affording nitrogenous food in an easily assimilated form.

A. G. S.—Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and you will glean much

information regarding the restoration of your health from its pages.

MARY CAIRD.—Hazeline may be safely taken internally, and is so employed as a styptic and astringent. It is used, diluted with water, as a gargle; the degree of dilution will depend on the severity of the throat-affection. Try Burroughs, Wellcome & Co.'s "Hazeline."

LEE.—The following has been successfully used in cases of falling hair, by way of stimulating hair growth:—Bay rum, two ounces; glycerine, two ounces; tincture of cantharides, one drachm; oil of bergamot, half a drachm; sulphate of quinine, ten grains; water, four ounces. To be used every morning, and to be rubbed into the roots of the hair, all other oils and pomades being avoided. Use a soft brush only, and wash the hair once in a week or ten days, at night, with Bayley's Soap and tepid water. Keep the hair short for a time.

J. B.—Itch is caused by a mite which infests the skin. The contagious nature of the disease depends, of course, on the conveyance of the mites from infected to healthy subjects. The treatment is a warm bath to begin with, and a thorough inunction with sulphur ointment over the affected parts. Care is to be taken that the ointment is not rubbed off. The patient should rest in bed thereafter, and in the morning take a warm bath, and repeat the inunction at night. Two or three such applications will suffice. Destroy the clothes worn during the period of infection.

PRESSMAN.—Avoid alcohol, salt foods, pastry, and indigestible articles at large. See that no source of irritation exists in your clothes, and wash the affected parts twice or thrice daily with Bayley's Spermaceti Soap and tepid water, dusting thereon, after washing, a little Fuller's Earth. Drink Pitkeathly Water for a time as a beverage. If these means do not cure you, write again.

SICK MAN.—Bathe the eyes night and morning with a little of a lotion (diluted with half its bulk of water) made by adding six grains of sulphate of zinc to six ounces of rose water. Apply a little pure white vaseline to the eyelids at night, and internally take fifteen drops Fer Bravais in water, thrice daily, after your meals.

LEX.—The formula for Wilson's Hair Wash is made as follows: Eau de Cologne, two ounces; tincture of cantharides, two drachms; oil of rosemary and oil of lavender, of each ten drops.

T. LEADRETT.—Take twenty drops of Cascara Cordial in water an hour before food, once daily. As to food, give up tea, coffee, and alcohol entirely; substitute milk, light puddings, white boiled fish, light boiled eggs, &c., for your present dietary, and take Scott's Oat Flour to breakfast.

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